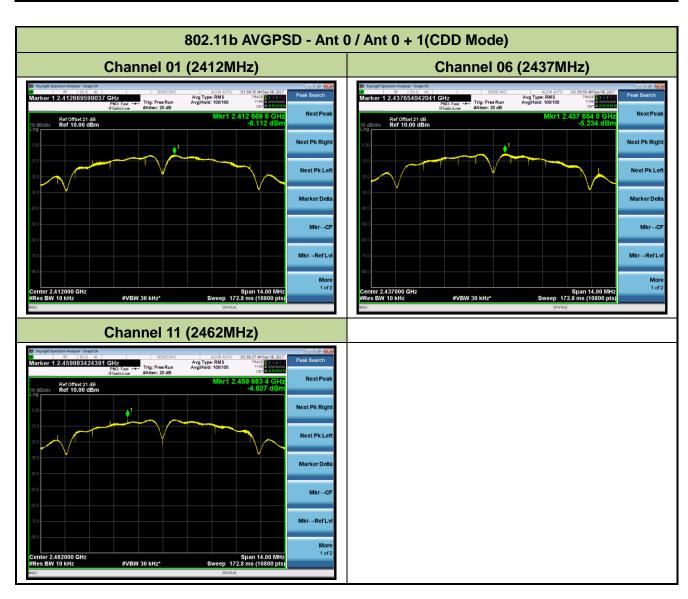
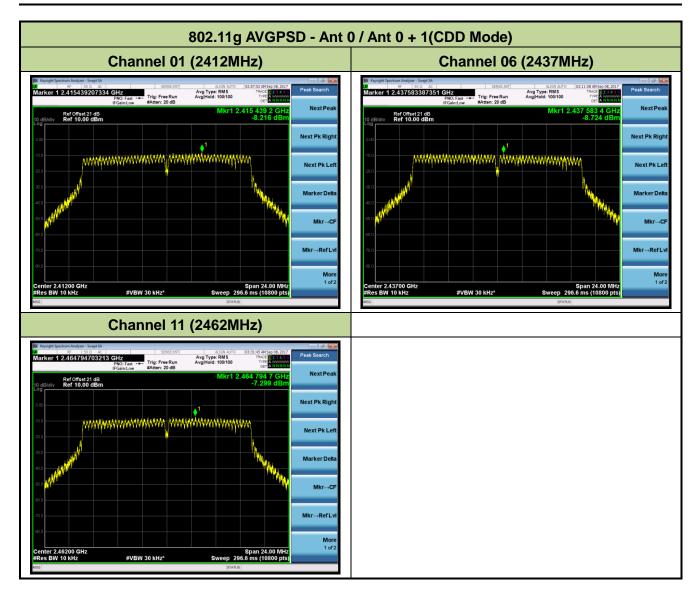




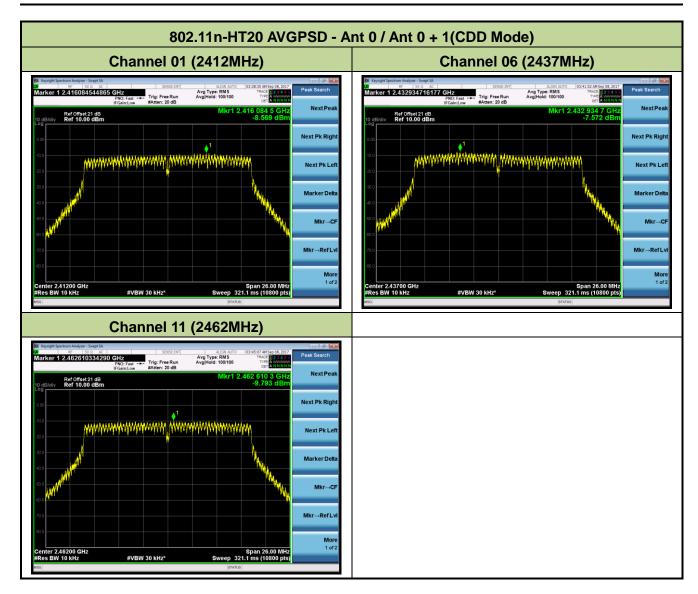
Product	ACCESS POINT	Temperature	27°C		
Test Engineer	Kevin Ker	Relative Humidity	65%		
Antenna Type	Directional Antenna (AP-ANT-48)				



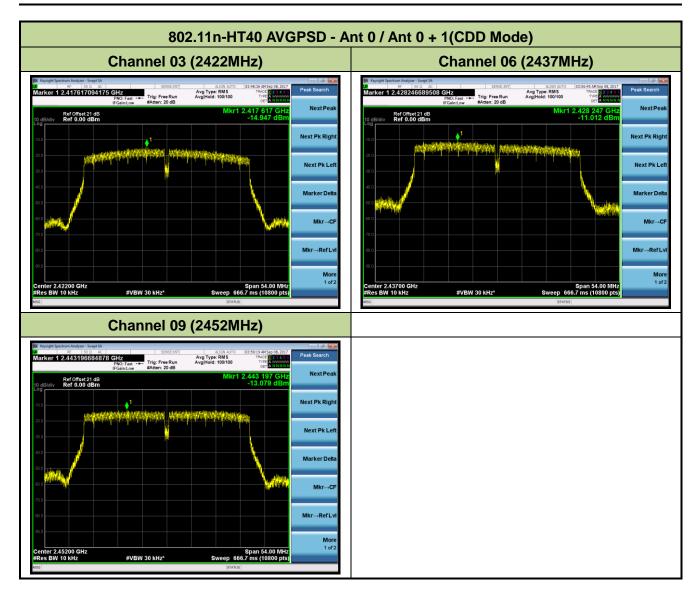




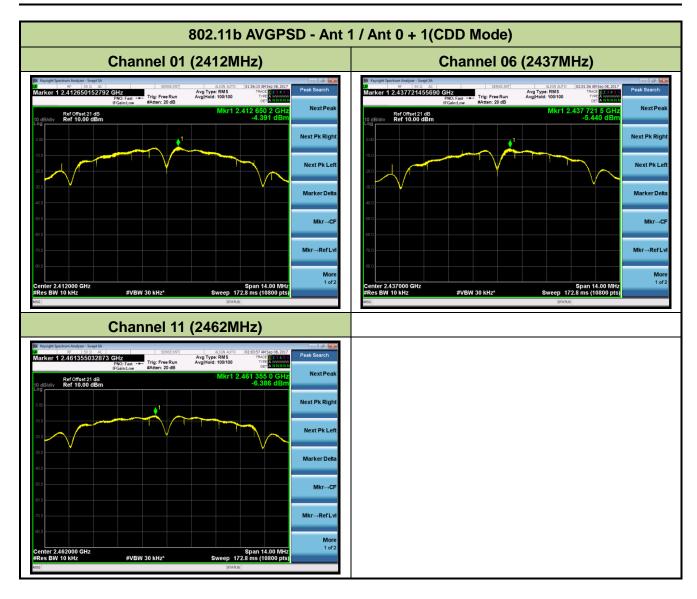




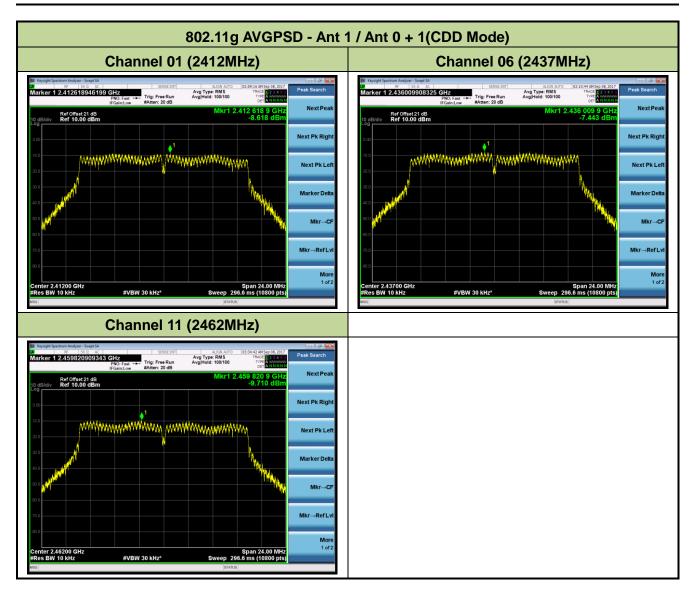




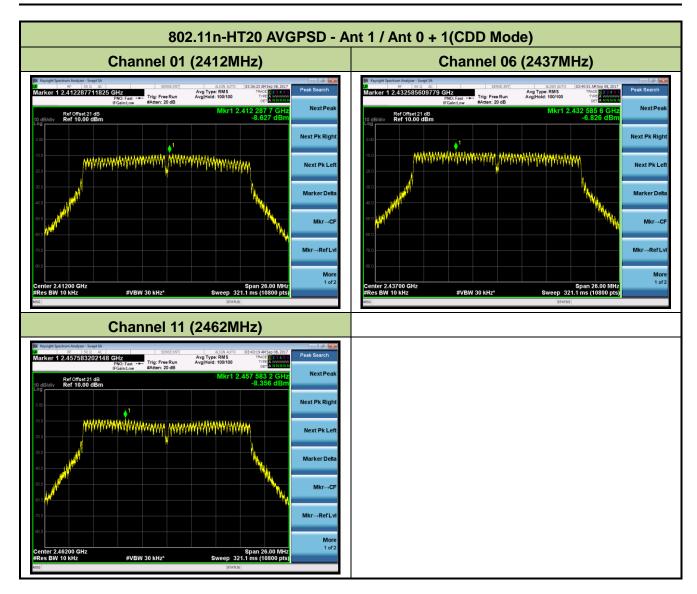




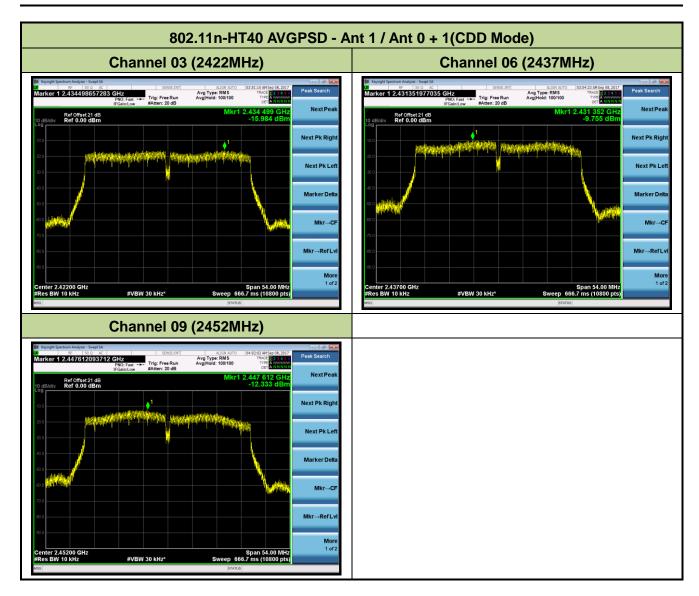




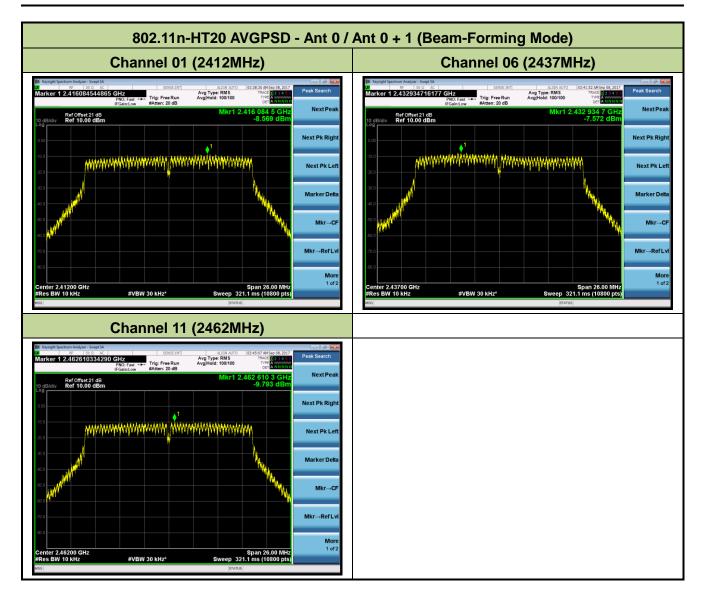




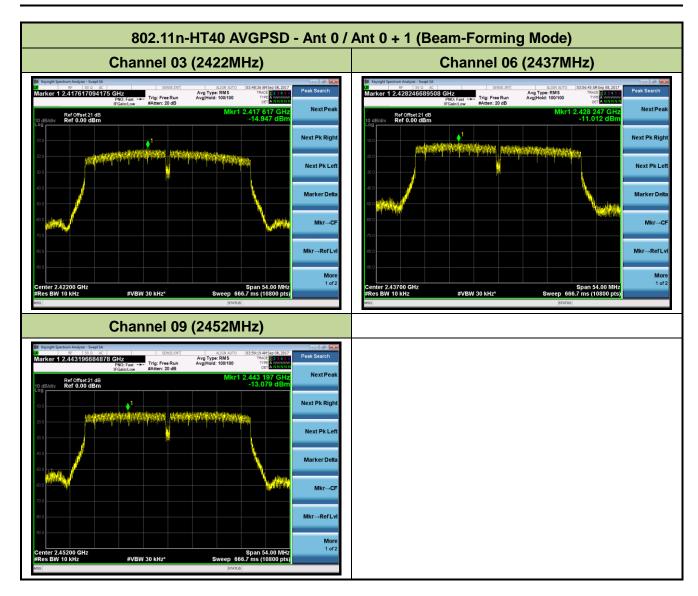




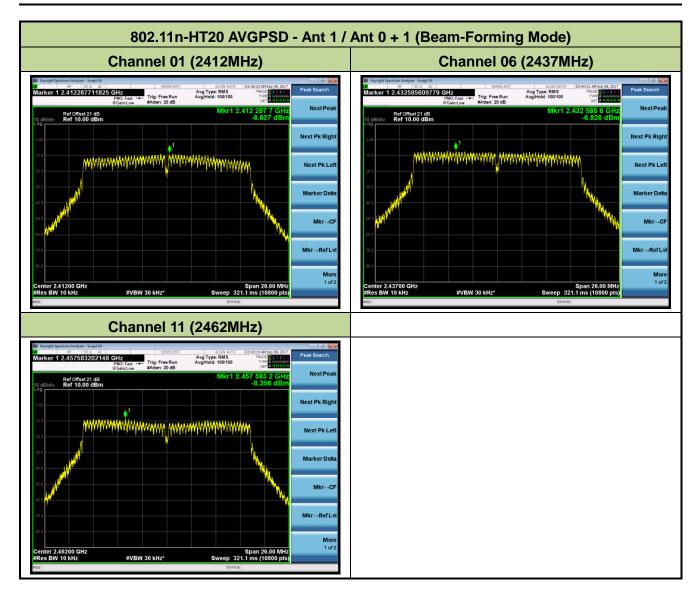




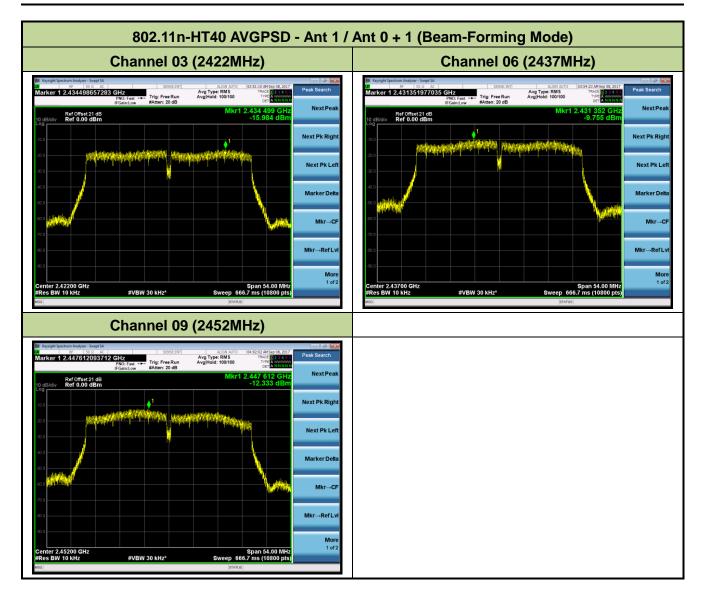














7.5. Conducted Band Edge and Out-of-Band Emissions

7.5.1.Test Limit

The limit for out-of-band spurious emissions at the band edge is 30dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

7.5.2.Test Procedure Used

KDB 558074 D01v04 - Section 11.2 & Section 11.3

7.5.3.Test Settitng

Reference level measurement

- 1. Set instrument center frequency to DTS channel center frequency
- 2. Set the span to ≥ 1.5 times the DTS bandwidth
- 3. Set the RBW = 100 kHz
- 4. Set the VBW ≥ 3 x RBW
- 5. Detector = peak
- 6. Sweep time = auto couple
- 7. Trace mode = max hold
- 8. Allow trace to fully stabilize

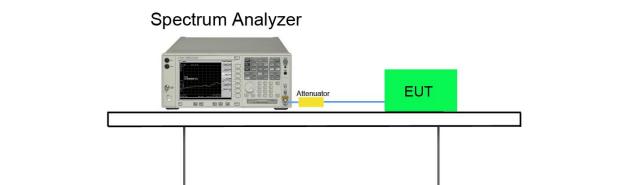
Emission level measurement

- 1. Set the center frequency and span to encompass frequency range to be measured
- 2. RBW = 100kHz
- 3. VBW = 300kHz
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep time = auto couple
- 7. The trace was allowed to stabilize

FCC ID: Q9DAPIN0318 Page Number: 58 of 231



7.5.4.Test Setup





7.5.5.Test Result

Product	ACCESS POINT	Temperature	27°C		
Test Engineer	Kevin Ker	Relative Humidity	65%		
Test Site	SR2	2017/09/07			
Test Item	Conducted Band Edge and Out-of-Band Emissions				

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	Limit (dBc)	Result
Ant 0 / Ant 0 + 1					
802.11b	1Mbps	01	2412	30	Pass
802.11b	1Mbps	06	2437	30	Pass
802.11b	1Mbps	11	2462	30	Pass
802.11g	6Mbps	01	2412	30	Pass
802.11g	6Mbps	06	2437	30	Pass
802.11g	6Mbps	11	2462	30	Pass
802.11n-HT20	MCS0	01	2412	30	Pass
802.11n-HT20	MCS0	06	2437	30	Pass
802.11n-HT20	MCS0	11	2462	30	Pass
802.11n-HT40	MCS0	03	2422	30	Pass
802.11n-HT40	MCS0	06	2437	30	Pass
802.11n-HT40	MCS0	09	2452	30	Pass

FCC ID: Q9DAPIN0318 Page Number: 60 of 231



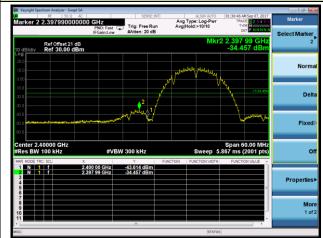
802.11b Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)

100kHz PSD reference Level



Low Band Edge



Spurious Emission



Note: The Value of the Display Line is -15.84dBm

Channel 06 (2437MHz)

100kHz PSD reference Level

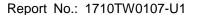


Spurious Emission

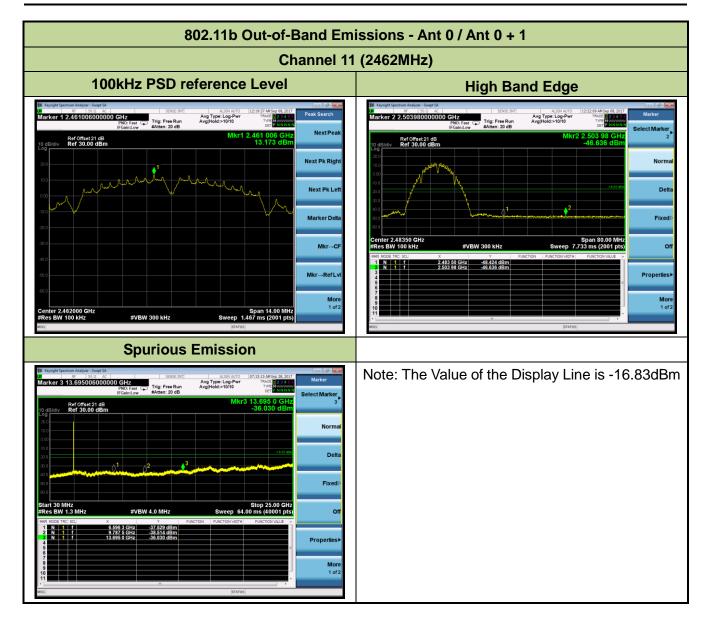


Note: The Value of the Display Line is -15.61dBm

FCC ID: Q9DAPIN0318 Page Number: 61 of 231







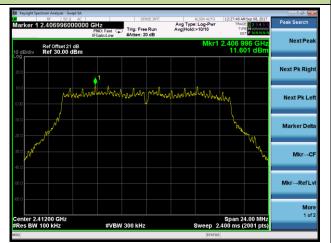
FCC ID: Q9DAPIN0318 Page Number: 62 of 231



802.11g Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)

100kHz PSD reference Level



Low Band Edge



Spurious Emission



Note: The Value of the Display Line is -18.40dBm

Channel 06 (2437MHz)

100kHz PSD reference Level

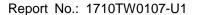


Spurious Emission

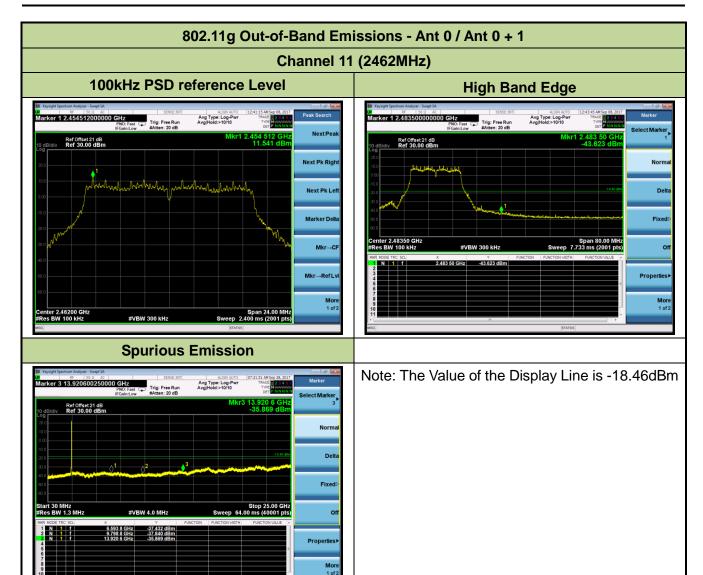


Note: The Value of the Display Line is -17.93dBm

FCC ID: Q9DAPIN0318 Page Number: 63 of 231









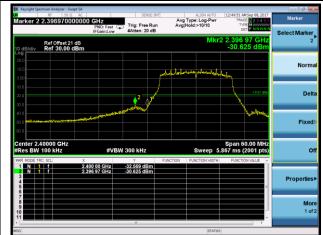
802.11n-HT20 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)

100kHz PSD reference Level



Low Band Edge



Spurious Emission



Note: The Value of the Display Line is -18.61dBm

Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission

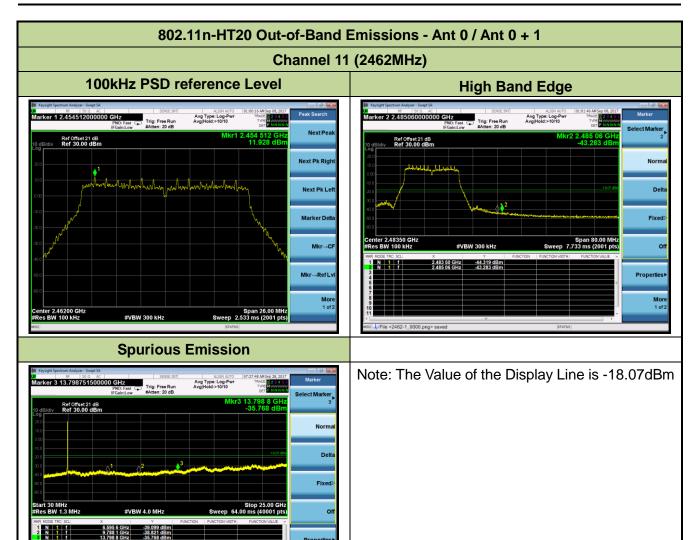


Note: The Value of the Display Line is -18.35dBm

FCC ID: Q9DAPIN0318 Page Number: 65 of 231









802.11n-HT40 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 03 (2422MHz)

100kHz PSD reference Level



Low Band Edge



Spurious Emission



Note: The Value of the Display Line is -25.83dBm

Channel 06 (2437MHz)

100kHz PSD reference Level

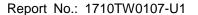


Spurious Emission

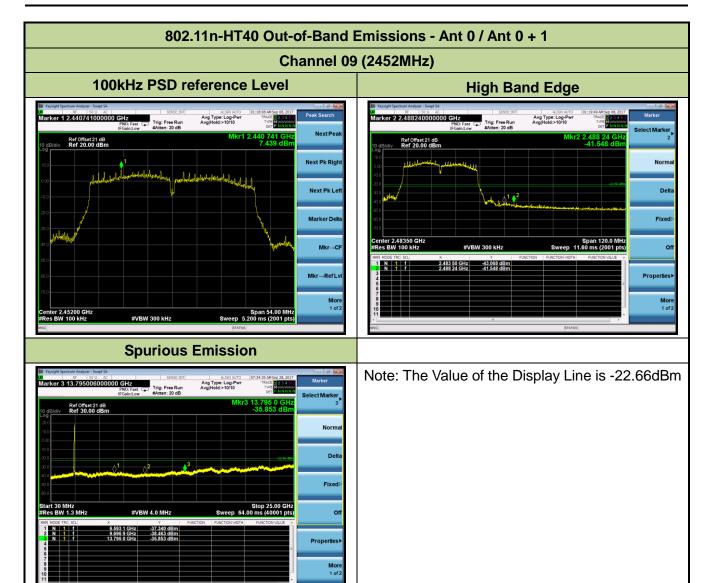


Note: The Value of the Display Line is -20.83dBm

FCC ID: Q9DAPIN0318 Page Number: 67 of 231









7.6. Radiated Spurious Emission Measurement

7.6.1.Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

	FCC Part 15 Subpart C Paragraph 15.209						
Frequency	Field Strength	Measured Distance					
[MHz]	[uV/m]	[Meters]					
0.009 - 0.490	2400/F (kHz)	300					
0.490 - 1.705	24000/F (kHz)	30					
1.705 - 30	30	30					
30 - 88	100	3					
88 - 216	150	3					
216 - 960	200	3					
Above 960	500	3					

7.6.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.6.3.Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz

FCC ID: Q9DAPIN0318 Page Number: 69 of 231



Quasi-Peak Measurements below 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. Span was set greater than 1MHz
- 3. RBW = as specified in Table 1
- 4. Detector = CISPR quasi-peak
- 5. Sweep time = auto couple
- 6. Trace was allowed to stabilize

Peak Measurements above 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.

If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.

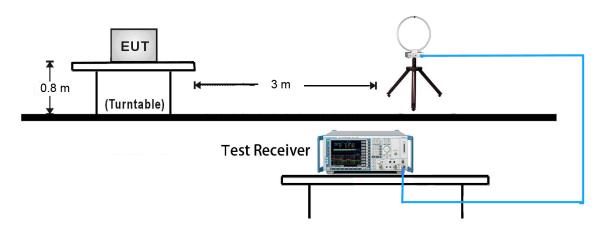
- 4. Detector = Peak
- 5. Sweep time = auto
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

FCC ID: Q9DAPIN0318 Page Number: 70 of 231

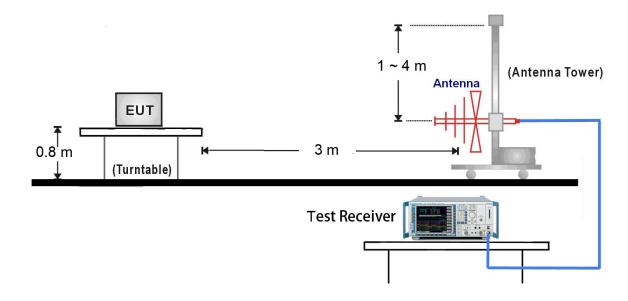


7.6.4.Test Setup

9kHz ~ 30MHz Test Setup:



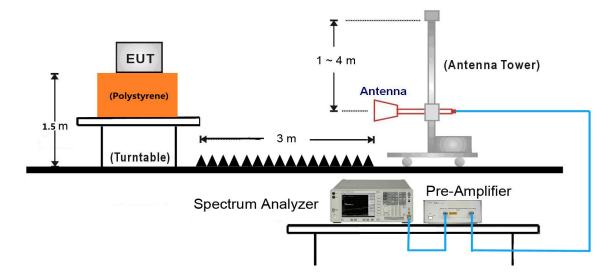
30MHz ~ 1GHz Test Setup:



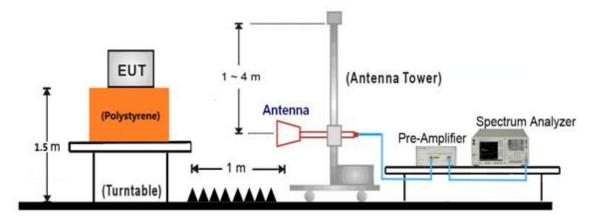
FCC ID: Q9DAPIN0318 Page Number: 71 of 231



1GHz ~ 18GHz Test Setup:

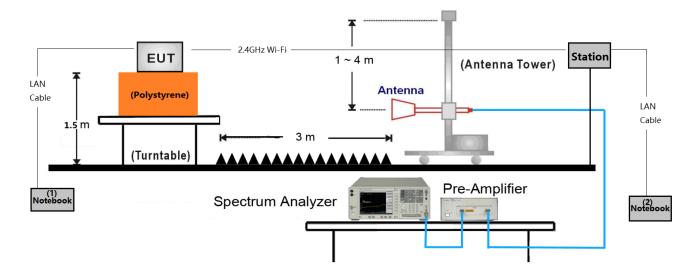


18GHz ~25GHz Test Setup:





Additional Beam-Forming Mode Test Setup (Apply to all BF radiated emission test frequency range)



Make the EUT connect with the station by 2.4GHz wireless.

Input some commands in the notebook (1) to open the EUT Beam Forming function, and setup the related test channel & data rate & power setting.

Make the notebook (1) ping with notebook (2) using the "Iperf" software that can produce one bigger duty cycle waveform.

Test Mode	Duty Cycle	T = Transmission Duration
	(%)	(ms)
802.11n-HT20	94.27	2.007
802.11n-HT40	93.99	1.737

FCC ID: Q9DAPIN0318 Page Number: 73 of 231



7.6.5.Test Result

Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C			
Test Engineer	Kevin Ker	Relative Humidity	56%			
Test Site	AC1	Test Date	2017/09/02			
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	01			
Remark:	Average measurement was no	t performed if peak	evel lower than average			
	limit. So the margin was calcul	ated using the avera	age limit for emissions fall			
	within the restricted bands. So	the margin was cald	culated using the average			
	limit for emissions fall within the restricted bands.					
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.					

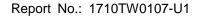
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7485.5	30.8	12.8	43.6	54.0	-10.4	Peak	Horizontal
	8174.0	32.9	12.0	44.9	54.0	-9.1	Peak	Horizontal
*	10035.5	29.7	15.5	45.2	82.8	-37.6	Peak	Horizontal
*	12747.0	27.6	18.9	46.5	82.8	-36.3	Peak	Horizontal
	7460.0	31.2	12.8	44.0	54.0	-10.0	Peak	Vertical
	8429.0	31.8	12.4	44.2	54.0	-9.8	Peak	Vertical
*	9848.5	30.4	16.1	46.5	82.8	-36.3	Peak	Vertical
*	12815.0	27.4	19.1	46.5	82.8	-36.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.8dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 74 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C			
Test Engineer	Kevin Ker	Relative Humidity	56%			
Test Site	AC1	Test Date	2017/09/02			
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	06			
Remark:	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. 					

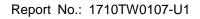
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	()	(dBµV)	(3.2)	(dBµV/m)	(======================================	()		
	7443.0	30.6	12.7	43.3	54.0	-10.7	Peak	Horizontal
	8233.5	31.2	11.9	43.1	54.0	-10.9	Peak	Horizontal
*	9942.0	29.7	15.3	45.0	86.4	-41.4	Peak	Horizontal
*	12815.0	27.4	19.1	46.5	86.4	-39.9	Peak	Horizontal
	7443.0	30.6	12.7	43.3	54.0	-10.7	Peak	Vertical
	8463.0	30.9	12.6	43.5	54.0	-10.5	Peak	Vertical
*	10112.0	30.5	15.8	46.3	86.4	-40.1	Peak	Vertical
*	12849.0	27.3	19.2	46.5	86.4	-39.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.4dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 75 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C			
Test Engineer	Kevin Ker	n Ker Relative Humidity				
Test Site	AC1	Test Date	2017/09/02			
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	11			
Remark:	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. 					

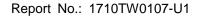
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	7400.5	29.8	12.6	42.4	54.0	-11.6	Peak	Horizontal
	8310.0	30.8	11.9	42.7	54.0	-11.3	Peak	Horizontal
*	10095.0	30.3	15.7	46.0	88.2	-42.2	Peak	Horizontal
*	12849.0	27.3	19.2	46.5	88.2	-41.7	Peak	Horizontal
	7400.5	29.8	12.6	42.4	54.0	-11.6	Peak	Vertical
	8165.5	30.5	12.1	42.6	54.0	-11.4	Peak	Vertical
*	9857.0	29.6	16.2	45.8	88.2	-42.4	Peak	Vertical
*	12747.0	27.5	18.9	46.4	88.2	-41.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.2dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 76 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C			
Test Engineer	Kevin Ker	Relative Humidity	56%			
Test Site	AC1	Test Date	2017/09/02			
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	01			
Remark:	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. 					

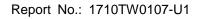
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7324.0	31.7	12.4	44.1	54.0	-9.9	Peak	Horizontal
	8344.0	32.1	12.0	44.1	54.0	-9.9	Peak	Horizontal
*	9933.5	30.4	15.3	45.7	88.8	-43.1	Peak	Horizontal
*	12747.0	27.5	18.9	46.4	88.8	-42.4	Peak	Horizontal
	7324.0	31.7	12.4	44.1	54.0	-9.9	Peak	Vertical
	8310.0	30.6	11.9	42.5	54.0	-11.5	Peak	Vertical
*	9976.0	30.8	15.3	46.1	88.8	-42.7	Peak	Vertical
*	12721.5	25.7	18.8	44.5	88.8	-44.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.8dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 77 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C				
Test Engineer	Kevin Ker	Relative Humidity	56%				
Test Site	AC1	Test Date	2017/09/02				
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	06				
Remark:	limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show 					

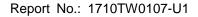
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7519.5	30.9	12.8	43.7	54.0	-10.3	Peak	Horizontal
	8242.0	32.6	11.9	44.5	54.0	-9.5	Peak	Horizontal
*	9950.5	29.9	15.3	45.2	89.1	-43.9	Peak	Horizontal
*	12721.5	25.7	18.8	44.5	89.1	-44.6	Peak	Horizontal
	7519.5	30.9	12.8	43.7	54.0	-10.3	Peak	Vertical
	8310.0	32.1	11.9	44.0	54.0	-10.0	Peak	Vertical
*	9882.5	29.5	15.6	45.1	89.1	-44.0	Peak	Vertical
*	12900.0	27.2	19.5	46.7	89.1	-42.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.1BµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 78 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C				
Test Engineer	Kevin Ker	Relative Humidity	56%				
Test Site	AC1	Test Date	2017/09/02				
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	11				
Remark:	limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show 					

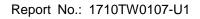
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	7528.0	30.8	12.8	43.6	54.0	-10.4	Peak	Horizontal
	8403.5	31.5	12.2	43.7	54.0	-10.3	Peak	Horizontal
*	10120.5	29.6	15.8	45.4	89.3	-43.9	Peak	Horizontal
*	12900.0	27.2	19.5	46.7	89.3	-42.6	Peak	Horizontal
	7528.0	30.8	12.8	43.6	54.0	-10.4	Peak	Vertical
	8352.5	30.0	12.0	42.0	54.0	-12.0	Peak	Vertical
*	9942.0	28.4	15.3	43.7	89.3	-45.6	Peak	Vertical
*	12755.5	27.1	18.9	46.0	89.3	-43.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.3dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 79 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C				
Test Engineer	Kevin Ker	Relative Humidity	56%				
Test Site	AC1	Test Date	2017/09/02				
Test Mode:	802.11n-HT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	01				
Remark:	limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show 					

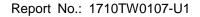
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7366.5	29.6	12.5	42.1	54.0	-11.9	Peak	Horizontal
	8242.0	32.1	11.9	44.0	54.0	-10.0	Peak	Horizontal
*	10129.0	30.4	15.9	46.3	89.8	-43.5	Peak	Horizontal
*	12755.5	27.1	18.9	46.0	89.8	-43.8	Peak	Horizontal
	7366.5	29.6	12.5	42.1	54.0	-11.9	Peak	Vertical
	8386.5	29.9	12.1	42.0	54.0	-12.0	Peak	Vertical
*	9976.0	31.1	15.3	46.4	89.8	-43.4	Peak	Vertical
*	12891.5	26.1	19.4	45.5	89.8	-44.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.8dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 80 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2017/09/02
Test Mode:	802.11n-HT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	06
Remark:	 Average measurement was not limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

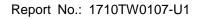
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	7536.5	29.5	12.8	42.3	54.0	-11.7	Peak	Horizontal
	8378.0	32.9	12.1	45.0	54.0	-9.0	Peak	Horizontal
*	10052.5	30.9	15.5	46.4	89.7	-43.3	Peak	Horizontal
*	12891.5	26.1	19.4	45.5	89.7	-44.2	Peak	Horizontal
	7536.5	29.5	12.8	42.3	54.0	-11.7	Peak	Vertical
	8276.0	30.4	11.9	42.3	54.0	-11.7	Peak	Vertical
*	9806.0	30.6	15.2	45.8	89.7	-43.9	Peak	Vertical
*	12883.0	26.4	19.4	45.8	89.7	-43.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.7dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 81 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C	
Test Engineer	Kevin Ker	in Ker Relative Humidity 56%		
Test Site	AC1	Test Date	2017/09/02	
Test Mode:	802.11n-HT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	11	
Remark:	 Average measurement was not limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average	

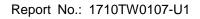
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	7519.5	31.7	12.8	44.5	54.0	-9.5	Peak	Horizontal
	8318.5	31.7	11.9	43.6	54.0	-10.4	Peak	Horizontal
*	10044.0	30.3	15.5	45.8	89.6	-43.8	Peak	Horizontal
*	12883.0	26.4	19.4	45.8	89.6	-43.8	Peak	Horizontal
	7519.5	31.7	12.8	44.5	54.0	-9.5	Peak	Vertical
	8395.0	31.1	12.2	43.3	54.0	-10.7	Peak	Vertical
*	9840.0	29.7	16.0	45.7	89.6	-43.9	Peak	Vertical
*	12908.5	26.6	19.5	46.1	89.6	-43.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.6dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 82 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2017/09/02
Test Mode:	802.11n-HT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	03
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

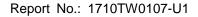
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7307.0	31.1	12.3	43.4	54.0	-10.6	Peak	Horizontal
	8148.5	31.6	12.1	43.7	54.0	-10.3	Peak	Horizontal
*	9865.5	29.6	16.0	45.6	81.9	-36.3	Peak	Horizontal
*	12908.5	26.6	19.5	46.1	81.9	-35.8	Peak	Horizontal
	7307.0	31.1	12.3	43.4	54.0	-10.6	Peak	Vertical
	8369.5	31.6	12.1	43.7	54.0	-10.3	Peak	Vertical
*	10078.0	32.4	15.6	48.0	81.9	-33.9	Peak	Vertical
*	12823.5	25.7	19.2	44.9	81.9	-37.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.9dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 83 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C	
Test Engineer	Kevin Ker	Relative Humidity 56%		
Test Site	AC1	Test Date	2017/09/02	
Test Mode:	802.11n-HT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	06	
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average	

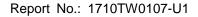
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7451.5	29.6	12.8	42.4	54.0	-11.6	Peak	Horizontal
	8250.5	30.0	11.9	41.9	54.0	-12.1	Peak	Horizontal
*	10188.5	30.1	16.2	46.3	82.6	-36.3	Peak	Horizontal
*	12823.5	25.7	19.2	44.9	82.6	-37.7	Peak	Horizontal
	7451.5	29.6	12.8	42.4	54.0	-11.6	Peak	Vertical
	8327.0	32.1	11.9	44.0	54.0	-10.0	Peak	Vertical
*	9831.5	30.4	15.9	46.3	82.6	-36.3	Peak	Vertical
*	12951.0	26.6	19.7	46.3	82.6	-36.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.6dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 84 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2017/09/02
Test Mode:	802.11n-HT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	09
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

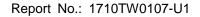
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7468.5	29.7	12.8	42.5	54.0	-11.5	Peak	Horizontal
	8429.0	29.9	12.4	42.3	54.0	-11.7	Peak	Horizontal
*	10188.5	27.3	16.2	43.5	84.8	-41.3	Peak	Horizontal
*	12951.0	26.6	19.7	46.3	84.8	-38.5	Peak	Horizontal
	7468.5	29.7	12.8	42.5	54.0	-11.5	Peak	Vertical
	8429.0	30.4	12.4	42.8	54.0	-11.2	Peak	Vertical
*	9831.5	30.3	15.9	46.2	84.8	-38.6	Peak	Vertical
*	12704.5	27.3	18.8	46.1	84.8	-38.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.8dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 85 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2017/09/02
Test Mode:	802.11n-HT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	01
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

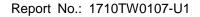
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7434.5	28.4	12.7	41.1	54.0	-12.9	Peak	Horizontal
	8318.5	29.2	11.9	41.1	54.0	-12.9	Peak	Horizontal
*	9772.0	27.7	14.9	42.6	84.5	-41.9	Peak	Horizontal
*	12857.5	28.9	19.3	48.2	84.5	-36.3	Peak	Horizontal
	7434.5	29.5	12.7	42.2	54.0	-11.8	Peak	Vertical
	8437.5	30.0	12.4	42.4	54.0	-11.6	Peak	Vertical
*	10078.0	29.1	15.6	44.7	84.5	-39.8	Peak	Vertical
*	12857.5	28.9	19.3	48.2	84.5	-36.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.5dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 86 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2017/09/02
Test Mode:	802.11n-HT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	06
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

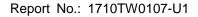
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7468.5	29.4	12.8	42.2	54.0	-11.8	Peak	Horizontal
	8403.5	28.5	12.2	40.7	54.0	-13.3	Peak	Horizontal
*	10078.0	28.2	15.6	43.8	84.2	-40.4	Peak	Horizontal
*	12764.0	27.3	19.0	46.3	84.2	-37.9	Peak	Horizontal
	7341.0	28.7	12.4	41.1	54.0	-12.9	Peak	Vertical
	8352.5	29.6	12.0	41.6	54.0	-12.4	Peak	Vertical
*	10137.5	30.0	15.9	45.9	84.2	-38.3	Peak	Vertical
*	12738.5	27.6	18.9	46.5	84.2	-37.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.2dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 87 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2017/09/02
Test Mode:	802.11n-HT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	11
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

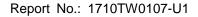
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7341.0	28.7	12.4	41.1	54.0	-12.9	Peak	Horizontal
	8412.0	29.8	12.3	42.1	54.0	-11.9	Peak	Horizontal
*	9993.0	30.4	15.4	45.8	83.9	-38.1	Peak	Horizontal
*	13129.5	27.5	20.1	47.6	83.9	-36.3	Peak	Horizontal
	7366.5	29.8	12.5	42.3	54.0	-11.7	Peak	Vertical
	8276.0	29.2	11.9	41.1	54.0	-12.9	Peak	Vertical
*	10171.5	27.8	16.1	43.9	83.9	-40.0	Peak	Vertical
*	13129.5	27.5	20.1	47.6	83.9	-36.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.9dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 88 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2017/09/02
Test Mode:	802.11n-HT40 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	03
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

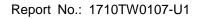
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	7366.5	28.8	12.5	41.3	54.0	-12.7	Peak	Horizontal
	8318.5	31.4	11.9	43.3	54.0	-10.7	Peak	Horizontal
*	9916.5	30.2	15.3	45.5	81.8	-36.3	Peak	Horizontal
*	12815.0	28.9	19.1	48.0	81.8	-33.8	Peak	Horizontal
	7443.0	30.8	12.7	43.5	54.0	-10.5	Peak	Vertical
	8369.5	30.4	12.1	42.5	54.0	-11.5	Peak	Vertical
*	10052.5	30.6	15.5	46.1	81.8	-35.7	Peak	Vertical
*	12815.0	28.9	19.1	48.0	81.8	-33.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.8dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 89 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2017/09/02
Test Mode:	802.11n-HT40 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	06
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

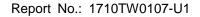
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		, , ,	100	, ,	- 1 0	10.1		
	7451.5	31.1	12.8	43.9	54.0	-10.1	Peak	Horizontal
	8386.5	30.0	12.1	42.1	54.0	-11.9	Peak	Horizontal
*	9831.5	27.3	15.9	43.2	81.6	-38.4	Peak	Horizontal
*	12968.0	28.8	19.8	48.6	81.6	-33.0	Peak	Horizontal
	7400.5	28.5	12.6	41.1	54.0	-12.9	Peak	Vertical
	8471.5	29.5	12.6	42.1	54.0	-11.9	Peak	Vertical
*	10120.5	27.7	15.8	43.5	81.6	-38.1	Peak	Vertical
*	12968.0	28.8	19.8	48.6	81.6	-33.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.6dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 90 of 231





Product	ACCESS POINT- Omni Antenna (AP-ANT-40)	Temperature	26°C	
Test Engineer	Kevin Ker	Relative Humidity	56%	
Test Site	AC1	Test Date	2017/09/02	
Test Mode:	802.11n-HT40 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	09	
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average	

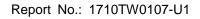
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7400.5	28.5	12.6	41.1	54.0	-12.9	Peak	Horizontal
	8471.5	31.4	12.6	44.0	54.0	-10.0	Peak	Horizontal
*	9899.5	30.0	15.4	45.4	81.1	-35.7	Peak	Horizontal
*	12849.0	26.6	19.2	45.8	81.1	-35.3	Peak	Horizontal
	7434.5	28.4	12.7	41.1	54.0	-12.9	Peak	Vertical
	8191.0	28.1	12.0	40.1	54.0	-13.9	Peak	Vertical
*	10171.5	28.2	16.1	44.3	81.1	-36.8	Peak	Vertical
*	12849.0	26.6	19.2	45.8	81.1	-35.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.1dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 91 of 231





Product	ACCESS POINT- Directional Antenna (AP-ANT-48)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2017/09/02
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	01
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

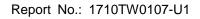
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7519.5	30.2	12.8	43.0	54.0	-11.0	Peak	Horizontal
	8284.5	32.9	11.9	44.8	54.0	-9.2	Peak	Horizontal
*	9857.0	28.9	16.2	45.1	90.2	-45.1	Peak	Horizontal
*	12781.0	26.5	19.0	45.5	90.2	-44.7	Peak	Horizontal
	7298.5	31.9	12.3	44.2	54.0	-9.8	Peak	Vertical
	8199.5	31.7	12.0	43.7	54.0	-10.3	Peak	Vertical
*	9899.5	29.9	15.4	45.3	90.2	-44.9	Peak	Vertical
*	12781.0	26.5	19.0	45.5	90.2	-44.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (120.2dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 92 of 231





Product	ACCESS POINT- Directional Antenna (AP-ANT-48)	Temperature	26°C
Test Engineer	Kevin Ker	Relative Humidity	56%
Test Site	AC1	Test Date	2017/09/02
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	06
Remark:	 Average measurement was no limit. So the margin was calcul within the restricted bands. So limit for emissions fall within th Other frequency was 20dB bel in the report. 	ated using the avera the margin was cald e restricted bands.	age limit for emissions fall culated using the average

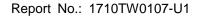
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	7298.5	31.9	12.3	44.2	54.0	-9.8	Peak	Horizontal
	8199.5	30.2	12.0	42.2	54.0	-11.8	Peak	Horizontal
*	10086.5	31.2	15.7	46.9	89.4	-42.5	Peak	Horizontal
*	12883.0	27.4	19.4	46.8	89.4	-42.6	Peak	Horizontal
	7536.5	30.4	12.8	43.2	54.0	-10.8	Peak	Vertical
	8352.5	31.5	12.0	43.5	54.0	-10.5	Peak	Vertical
*	10078.0	29.8	15.6	45.4	89.4	-44.0	Peak	Vertical
*	12883.0	27.4	19.4	46.8	89.4	-42.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.4dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 93 of 231





Product	ACCESS POINT- Directional Antenna (AP-ANT-48)	Temperature	26°C				
Test Engineer	Kevin Ker	Relative Humidity	56%				
Test Site	AC1	Test Date	2017/09/02				
Test Mode:	802.11b - Ant 0 + 1 (CDD Mode)	Test Channel:	11				
Remark:	limit. So the margin was calcul within the restricted bands.	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show 					

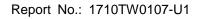
Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	()	(dBµV)	(3.2)	(dBµV/m)	(= = : : : :)	()		
	7536.5	30.4	12.8	43.2	54.0	-10.8	Peak	Horizontal
	8276.0	31.7	11.9	43.6	54.0	-10.4	Peak	Horizontal
*	10078.0	30.8	15.6	46.4	88.3	-41.9	Peak	Horizontal
*	12900.0	27.6	19.5	47.1	88.3	-41.2	Peak	Horizontal
	7400.5	29.6	12.6	42.2	54.0	-11.8	Peak	Vertical
	8395.0	31.1	12.2	43.3	54.0	-10.7	Peak	Vertical
*	10171.5	30.1	16.1	46.2	88.3	-42.1	Peak	Vertical
*	12849.0	26.7	19.2	45.9	88.3	-42.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.3dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 94 of 231





Product	ACCESS POINT- Directional Antenna (AP-ANT-48)	Temperature	26°C				
Test Engineer	Kevin Ker	Relative Humidity	56%				
Test Site	AC1	Test Date	2017/09/02				
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	01				
Remark:	limit. So the margin was calcul within the restricted bands.	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show 					

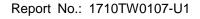
Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
	7511.0	31.3	12.8	44.1	54.0	-9.9	Peak	Horizontal
	8276.0	31.5	11.9	43.4	54.0	-10.6	Peak	Horizontal
*	10078.0	30.8	15.6	46.4	90.3	-43.9	Peak	Horizontal
*	12849.0	26.7	19.2	45.9	90.3	-44.4	Peak	Horizontal
	7511.0	31.3	12.8	44.1	54.0	-9.9	Peak	Vertical
	8480.0	30.9	12.7	43.6	54.0	-10.4	Peak	Vertical
*	10086.5	30.6	15.7	46.3	90.3	-44.0	Peak	Vertical
*	13104.0	27.5	20.1	47.6	90.3	-42.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (120.3dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 95 of 231





Product	ACCESS POINT- Directional Antenna (AP-ANT-48)	Temperature	26°C				
Test Engineer	Kevin Ker	Relative Humidity	56%				
Test Site	AC1	Test Date	2017/09/02				
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	06				
Remark:	limit. So the margin was calcul within the restricted bands.	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show 					

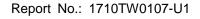
Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7502.5	29.9	12.8	42.7	54.0	-11.3	Peak	Horizontal
	8310.0	30.3	11.9	42.2	54.0	-11.8	Peak	Horizontal
*	10052.5	30.5	15.5	46.0	90.1	-44.1	Peak	Horizontal
*	13104.0	27.5	20.1	47.6	90.1	-42.5	Peak	Horizontal
	7502.5	29.9	12.8	42.7	54.0	-11.3	Peak	Vertical
	8276.0	32.1	11.9	44.0	54.0	-10.0	Peak	Vertical
*	9814.5	30.1	15.4	45.5	90.1	-44.6	Peak	Vertical
*	12832.0	28.0	19.2	47.2	90.1	-42.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (120.1dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 96 of 231





Product	ACCESS POINT- Directional Antenna (AP-ANT-48)	Temperature	26°C				
Test Engineer	Kevin Ker	Relative Humidity	56%				
Test Site	AC1	Test Date	2017/09/02				
Test Mode:	802.11g - Ant 0 + 1 (CDD Mode)	Test Channel:	11				
Remark:	limit. So the margin was calcul within the restricted bands.	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show 					

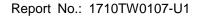
Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
	7477.0	30.9	12.8	43.7	54.0	-10.3	Peak	Horizontal
	8429.0	31.0	12.4	43.4	54.0	-10.6	Peak	Horizontal
*	9916.5	29.4	15.3	44.7	89.4	-44.7	Peak	Horizontal
*	12832.0	28.0	19.2	47.2	89.4	-42.2	Peak	Horizontal
	7477.0	30.9	12.8	43.7	54.0	-10.3	Peak	Vertical
	8361.0	32.3	12.0	44.3	54.0	-9.7	Peak	Vertical
*	9831.5	31.2	15.9	47.1	89.4	-42.3	Peak	Vertical
*	12942.5	27.3	19.7	47.0	89.4	-42.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.4dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 97 of 231





Product	ACCESS POINT- Directional Antenna (AP-ANT-48)	Temperature	26°C				
Test Engineer	Kevin Ker	Relative Humidity	56%				
Test Site	AC1	Test Date	2017/09/02				
Test Mode:	802.11n-HT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	01				
Remark:	limit. So the margin was calcul within the restricted bands.	 Average measurement was not performed if peak level lower than average limit. So the margin was calculated using the average limit for emissions fall within the restricted bands. Other frequency was 20dB below limit line within 1-18GHz, there is not show 					

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
	7477.0	30.9	12.8	43.7	54.0	-10.3	Peak	Horizontal
	8361.0	32.3	12.0	44.3	54.0	-9.7	Peak	Horizontal
*	9831.5	31.2	15.9	47.1	90.1	-43.0	Peak	Horizontal
*	12942.5	27.3	19.7	47.0	90.1	-43.1	Peak	Horizontal
	7536.5	29.1	12.8	41.9	54.0	-12.1	Peak	Vertical
	8310.0	31.0	11.9	42.9	54.0	-11.1	Peak	Vertical
*	10061.0	31.4	15.6	47.0	90.1	-43.1	Peak	Vertical
*	12959.5	27.2	19.7	46.9	90.1	-43.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (120.1dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

FCC ID: Q9DAPIN0318 Page Number: 98 of 231